HABITAT AND SPECIES ANNEX
PROGRESS REPORT OF THE PARTIES CHAPTER

OVERVIEW

The Great Lakes Basin is surrounded by more than 10,000 miles of shoreline that supports globally rare habitats and species. The Great Lakes ecosystem's sand dunes, coastal marshes, rocky shorelines, lakeplain prairies, savannas, forests, fens, wetlands and other landscapes contain features that are uniquely represented in the Basin with assorted fish and wildlife. Though the shorelines are expansive with native habitats and species, ecological threats target these aquatic and terrestrial domains. The Habitat and Species Annex of the 2012 GLWQA commit Canada and the United States to conserve, protect, maintain, restore and enhance the resilience of native species and their habitats, as well as supporting essential ecosystem services in the basin.

The Habitat and Species Annex commits to the health of Great Lakes habitats and species, by:

1. conducting a baseline survey against which to establish a target of net habitat gain and to measure future progress;

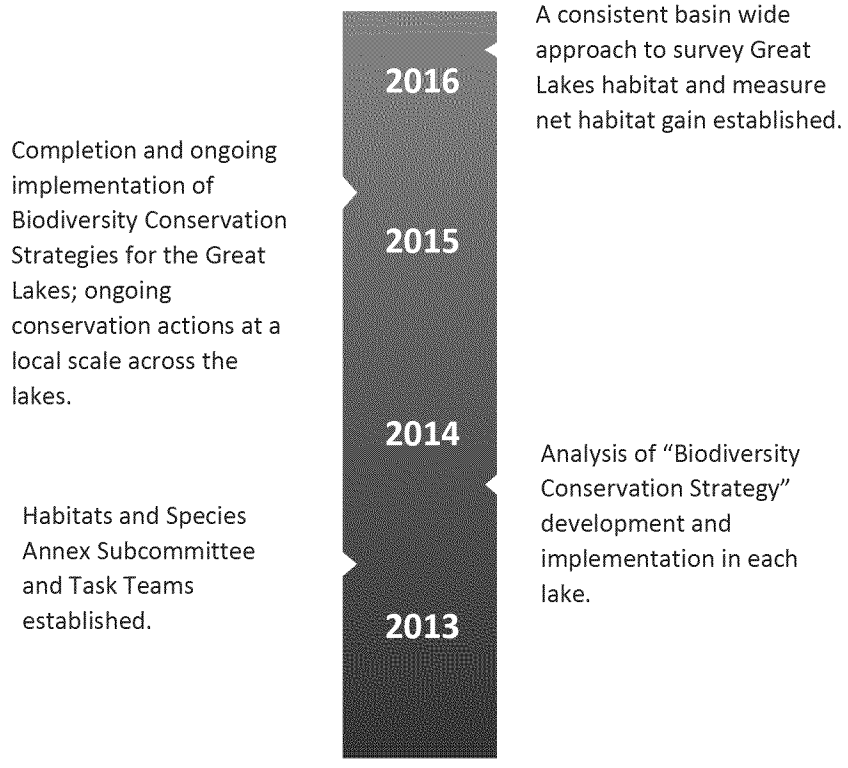
2. completing the development and implementation of lakewide conservation strategies;

3. assessing gaps in current programs and initiatives, facilitating and strengthening both binational and domestic programs; and

4. increasing awareness of habitat and species and methods to conserve, protect and enhance their resilience.

These commitments will contribute to the recovery of populations of species at risk, restoration of degraded native habitat and species, and a net gain in habitat.

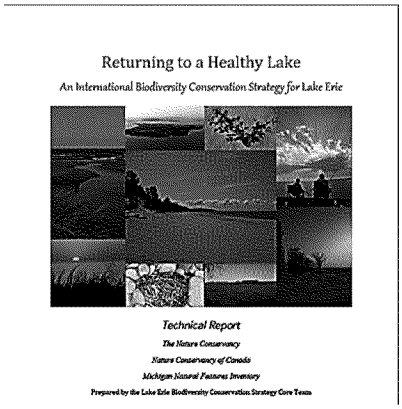
PROGRESS TOWARD MEETING GLWQA COMMITMENTS

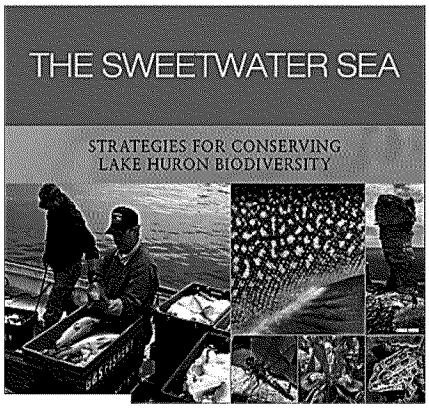


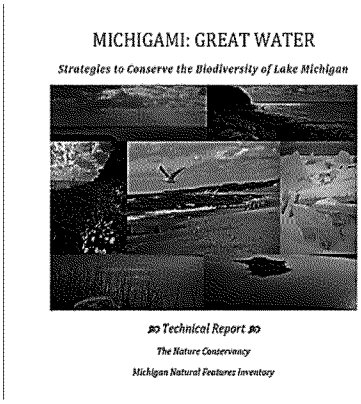
This Annex's implementation is supported by the Habitat and Species Annex Subcommittee, co-led by Environment and Climate Change Canada and the United States Fish and Wildlife Service. Organizations on the subcommittee include: [insert logos]

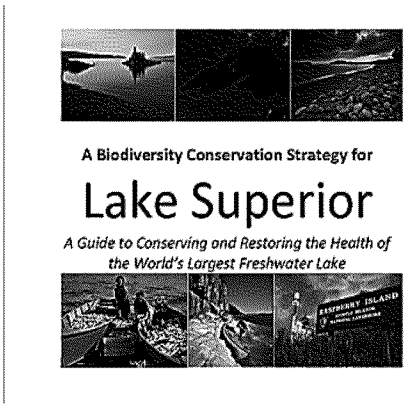
BINATIONAL ACTIONS TAKEN FOR KEY COMMITMENTS

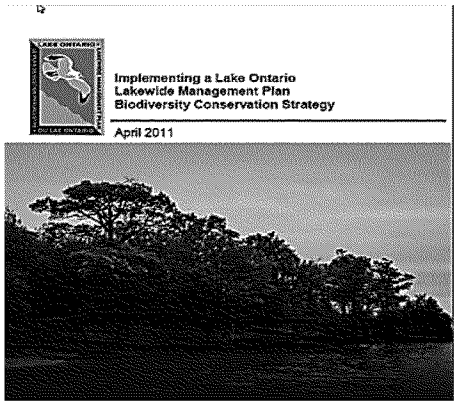
Development of the Biodiversity Conservation Strategies for all lakes, including connecting channels & the implementation of priority actions identified through existing programs and agreements.







- 



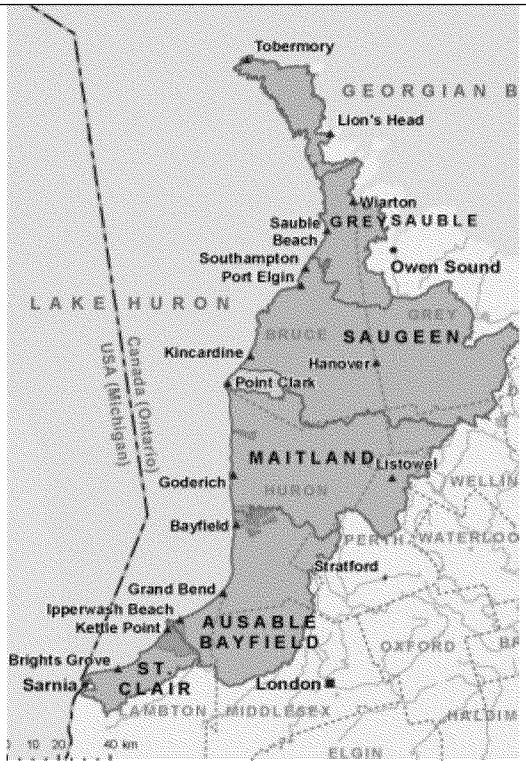
Lakewide habitat and species protection and restoration conservation strategies, also called Biodiversity Conservation Strategies (Strategies), were developed for all five of the Great Lakes as of February 12, 2015. The Strategies assess the status and threats to lakewide biodiversity and recommend conservation priorities for native species and their habitats. The Executive Summaries are available on binational.net (www.binational.net/2015/02/23/habitat-and-species-strategies).

- Each Strategy is a product of extensive collaboration among lakewide regional and local stakeholders. They serve as a tool to foster and guide a shared implementation of priority conservation actions among federal, state, provincial, tribal, academic, municipal and watershed management agency representatives. There is strong support for the adaptive management approach in the planning, application and implementation of the Strategies across the lakes.

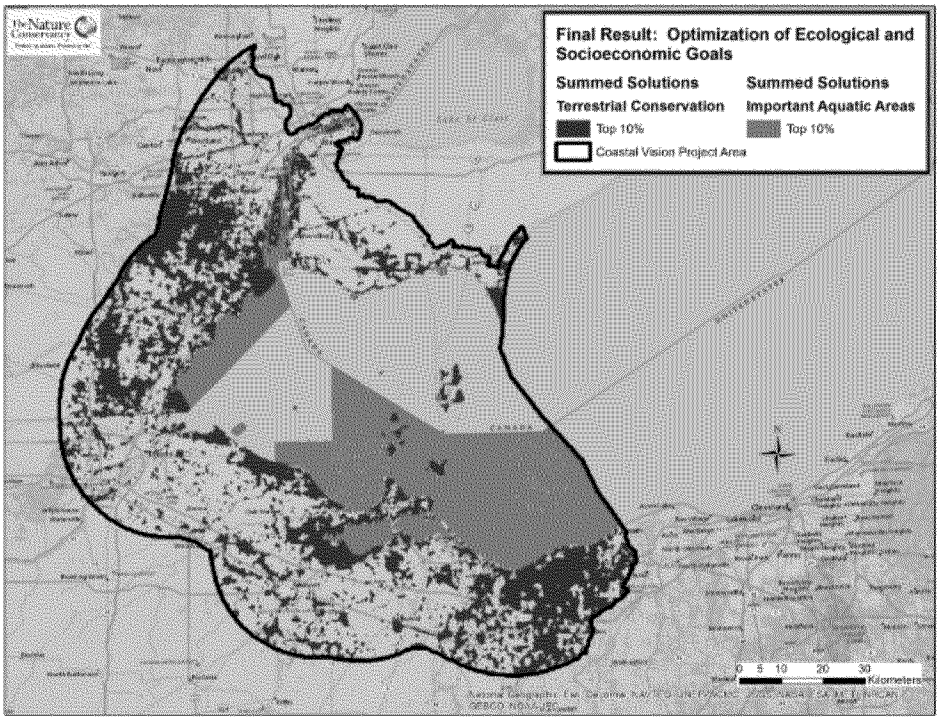
- The Lake Superior Partnership is currently in the process of preparing watershed-level plans to further guide and support implementation of the recently released (2015) Biodiversity Conservation Strategy at a local level. The Lake Ontario Partnership used the broader Lake Ontario Biodiversity Strategy to produce an implementation plan to focus on and implement priority actions within the 2012 GLWQA. Other Lake Partnerships are identifying regional (or watershed based) biodiversity objectives and outlining the specific actions required to address habitat and species issues on a

more manageable scale.

- The table below illustrates several examples of how the Strategies are being used in each lake basin to inform and implement priority conservation actions.

Lake Huron: Healthy Lake Huron Healthy Lake Huron is a team of dedicated environmental professionals who coordinate actions aimed at improving overall water quality along the southeast shores of Lake Huron. The lake Partnership is taking actions to address the issue of non-point source pollution, which has been identified as a critical threat in their Biodiversity Conservation Strategy.	 Membership of the Healthy Lake Huron group (www.healthylakehuron.ca)
Lake Superior: Superior Streams The Lake Superior Biodiversity Conservation Strategy classified dams and barriers as a high threat to meeting biodiversity targets. As a preliminary step in addressing this threat, a team of specialists using geospatial technology from Lakehead University in Ontario is leading an effort to compile the relevant data to develop a decision support tool to aid in decision-making on the matter.	 The Black Sturgeon Dam on the Black Sturgeon River, Ontario (Photo Credit: Ontario

	Ministry of Natural Resources)
Lake Ontario: Bloater Fish Stocking In Lake Ontario, the Lake Partnership identified the restoration of native preyfish species as a priority for the implementation of the Biodiversity Conservation Strategy. Canadian and United States agencies have initiated a program to reintroduce bloater to the lake in 2012. The program is ongoing, and nearly 62,000 bloaters were released in November, 2015.	 Dale Hanson from the Green Bay Fish and Wildlife Conservation Office assists with bloater egg collection (Photo Credit: United States Fish and Wildlife Service)
Lake Michigan: Lake Herring Restoration Restoration of the native Lake Herring is a priority identified in the Lake	

Michigan Biodiversity Conservation Strategy. To help restore the species to its historical status as a primary prey fish in Lake Michigan, the Little Traverse Bay Bands of Odawa Indians released nearly 50,000 summer fingerling and 8,000 fall fingerling into Little Traverse Bay, Michigan, in 2014. The Little Traverse Bay Bands of Odawa Indians is currently evaluating the success of the fingerling releases.	Lake Herring (Photo Credit: United States Environmental Protection Agency)
Lake Erie: Western Basin Conservation Vision Targets and goals from the Lake Erie Biodiversity Conservation Strategy were used in the development of a regional implementation plan called the Western Basin Conservation Vision. This plan identifies and maps areas to focus local conservation investments to meet regional conservation goals.	 Final Results of the Optimization of Ecological and Socioeconomic Goals (http://nature.ly/WLEcoastalvision)

A baseline survey of the existing habitat against which to establish a Great Lakes Basin Ecosystem target of net habitat gain and measure future progress

- *Conducting A Baseline Survey of Great Lakes Habitat: Assessing and Measuring Progress toward a Great Lakes Ecosystem Target of Net Habitat Gain* draft report was published in May 2016, as an approach to measure baseline conditions of habitat and monitor change over time through development with support from engaging experts and partners around the lakes through a series of binational workshops, meetings and webinars.

- The Baseline Survey approach is built upon existing Great Lakes monitoring programs and emphasizes the use of remotely sensed information for maximum data coverage. The physical characteristics of the lakes will be used to map different habitat types and the condition of the habitats will then be assessed. The baseline survey will be conducted on a reoccurring basis to track changes in the ecosystem over time and monitor progress. The approach will undergo further refinement and implementation will follow.

- A net gain in habitat will require an understanding of not just the quantity of the habitats that comprise the Great Lakes, but also their functionality and condition. Taking a "place-based" approach is advised which will consider physical characteristics and natural processes that structure, organize and define aquatic ecosystems and regulate the biological and chemical elements of the system. This is a primary step in creating a holistic understanding of the Great Lakes ecosystem.

DOMESTIC ACTIONS TAKEN

- Canada has multiple existing federal and provincial programs which contribute to the ongoing goals of the Habitats and Species Annex, including programs run by Parks Canada, Environment and Climate Change Canada's Wildlife Service and the Ontario Ministry of Natural Resources and Forestry. In addition, there are many non-governmental partners making significant contributions to habitat and species conservation, including the Nature Conservancy of Canada, Conservation Ontario and the many individual Conservation Authorities in the province, the Ontario Federation of Anglers and Hunters, Ducks Unlimited, and Stewardship Councils.

- In the United States, multiple federal and state agencies, as well as local and regional conservation entities, non-governmental organizations, and myriad of conservation partners conduct a wide range of activities related to fish, wildlife and habitat. Many of these activities support direct or indirect goals and priorities of the Habitats and Species Annex. In addition to base-funded activities conducted by federal agencies, the Great Lakes Restoration Initiative (GLRI) has boosted funding in recent years to supplement agency budgets to allow them to pursue high priority conservation and restoration needs throughout the Great Lakes Basin, including fish and wildlife habitat.

- In 2015, GLRI agencies and their partners have implemented 57 habitat and species projects adding more than 875 habitat and species underway or completed since the 2010 inception of the GLRI. Ten 2015 GLRI projects were directed towards protecting, restoring, and enhancing Piping Plover – an endangered species - populations in the Great Lakes Basin and over 40 projects have improved conditions for numerous federally and non-federally listed species in the Great Lakes such as Lake Sturgeon.

- Assistance from the GLRI implemented protection, restoration and enhancement projects that have reopened over 3,800 miles of Great Lakes tributaries, and increased aquatic connectivity for numerous fish species. More than 36,000 acres of habitat in targeted watersheds were protected, restored and enhanced in order to sustain Great Lakes habitats and species populations. 300 miles of Great Lakes shoreline and riparian corridors, and 7,000 acres of Great Lakes coastal wetlands were protected, restored, and enhanced in 2015 alone.

- GLRI partners have completed the removal of the Saginaw Bay Dam during 2015. The dam at Frankenmuth, Michigan initially blocked the passage of fish to more than 1,700 miles of upstream spawning habitat on the Cass River and connecting tributaries since it was built in the 1850s. It is now placed with a rock ramp with a series of rock weirs to allow passage of fish species, such as walleye and lake sturgeon. Fourteen separate weirs and adjacent “resting pools” have been constructed over a span of approximately 350 feet to provide a roughly 3% grade for non-jumping targeted species.

- In 2015, GLRI partners have reconnected the previously isolated Ottawa National Wildlife Refuge wetlands to Crane Creek and Lake Erie in Ohio. For the first time since the 1940s, the reconnected wetlands now function as a productive spawning ground and nursery area. Less than one week after re-establishing connectivity, Longnose Gar were found spawning in one of the pools. Thirteen species of fish not previously found entered through the structure and actively use the reconnected wetlands.

- The Fond du Lac Band of Lake Superior Chippewa developed better ways to control water levels and protect sustainable wild rice populations with GLRI funds. Projects included water control

structures, beaver dam removals and channel obstruction removal that resulted in the protection of 855 acres of ecologically and culturally important wild rice habitat on the Fond du Lac Reservation in northeastern Minnesota. Federal partners and local Chippewa removed 97 acres of competing aquatic plan species from Big Rice Lake and 59 acres of aggressive perennial vegetation from Perch Lake. In the St. Louis River Estuary partners reseeded 121 acres with wild rice. During the 2015 GLRI fiscal year, federal agencies and their partners restored and protected a total of 1,132 acres of wild rice habitat in Fond du Lac waters.